

Release Notes

hp StorageWorks Fabric Manager Version 4.2.x

Fourth Edition (September 2004)

Part Number: AA-RUR2D-TE

This document contains last-minute and supplemental information about Fabric Manager 4.2.x. In case of conflicting information between these Release Notes and other documents in this product release, the Release Notes take precedence.

For the latest version of these Release Notes and other Fabric Manager documentation, visit the HP storage web site at: <http://www.hp.com/country/us/eng/prodserv/storage.html>.



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Printed in the U.S.A.

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About this Document

This document provides last-minute changes that may not be included in the *HP StorageWorks Fabric Manager Version 4.2.x User Guide*. It also contains workarounds for problems encountered during qualification.

This section identifies the audience for these Release Notes and provides high-level descriptions of the information it contains.

Release Notes Information

These Release Notes cover the following major topics:

- [Documentation](#), page 4
- [Overview](#), page 4
- [System Requirements - Windows Environments](#), page 6
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- [Switch Support](#), page 6
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Audience

These Release Notes are intended for systems administrators and technicians who are responsible for installing, operating, and managing Fibre Channel SAN switches using Fabric Manager 4.2.x.

Technical Support

Contact Hewlett-Packard support for hardware, firmware, and software support, including product repairs and parts ordering. To assist your support representative and to expedite your call, have the following information available when you call:

- Technical support contact number, if available
- Switch model
- Switch operating system version
- Error messages received
- Output from `supportshow` command
- Detailed problem description and specific questions
- Description of any troubleshooting steps already performed and results

Documentation

This section discusses documentation associated with the Fabric Manager 4.2.x.

Other Fabric Manager Documentation

Additional documentation, including white papers and best practices documents, are available via the HP web site at: <http://www.hp.com>.

Note: HP has made every effort to provide you with the most up-to-date Web retrieval procedures available at time of print. Note, however, that Web page links and pointers are subject to change.

To access the technical documentation:

1. Locate the **Storage** section of the Web page.
2. Under **Networked storage**, locate the **by type** subsection.
3. Click **SAN infrastructure**. The **SAN infrastructure** page displays.
4. Locate the **Fibre Channel Switches** section.
5. Locate the **B-Series Fabric** subsection.
6. Click the name of one of the switches you are going to manage with Fabric Manager. The switch overview page displays.
7. Locate the **product information** section.
8. Click **technical documents**.
9. Select the applicable documents.

For information about Fibre Channel standards, visit the Fibre Channel Industry Association web site, at: <http://www.fibrechannel.org>.

Overview

Fabric Manager is a powerful application that manages multiple HP StorageWorks switches, routers, and fabrics in real time. Fabric Manager provides the essential functions for efficiently configuring, monitoring, dynamically provisioning, and managing HP SAN fabrics on a daily basis.

Through its single-point SAN management platform, Fabric Manager facilitates the global integration and execution of management tasks across multiple fabrics, thereby lowering the overall cost of SAN ownership. As a result, it provides a flexible and powerful tool, optimized to provide organizations with rapid access to critical SAN information.

Fabric Manager is tightly integrated with other HP SAN management products, such as Advanced Web Tools and Fabric Watch. Organizations can also use Fabric Manager with such other leading SAN and storage resource management applications as the drill-down element manager for single or multiple HP fabrics.

Fabric Manager Capabilities

Fabric Manager provides users the ability to:

- Efficiently provision, monitor, and administer large numbers of switches and multiple HP SAN fabrics.
- Perform management tasks across multiple devices and fabrics as a single management operation.
- Intelligently group multiple HP switches or ports to facilitate aggregated management.
- Visualize and track changes to SAN configuration and state information through multiple views at multiple levels of detail.
- Launch Fabric Manager from other enterprise management applications, such as HP OpenView.
- Track SAN assets by using detailed table views that can be exported to a spreadsheet.
- Discover details about devices logged in to the fabric, including HBA asset information.
- View the SAN layout through a topology map that specifies ISL, switch, and device details.
- Identify, isolate, and manage SAN events across large numbers of switches and fabrics.

New Features in Fabric Manager 4.2.x

Fabric Manager 4.2.x contains the following new features:

- MP Router support
 - Ability to share devices between two or more fabrics.
 - Ability to configure EX_ports on one or more FC routers.
 - Ability to display logical SANs in the Topology view.
 - Ability to display logical SAN information in the new LSAN view.
- Change Management
 - Ability to retrieve and save the current configuration and state of one or more fabrics snapshots in the database.
 - Ability to detect and display differences between the current and saved snapshots on demand and on a user-defined schedule.
 - Ability to define a snapshot as a baseline, and to generate alerts and send e-mail messages when differences from the baseline snapshot are detected.
- SupportShow
 - Ability to save the fabric-wide supportShow command output as text files. These files can be used for troubleshooting.
- Performance Monitoring
 - Ability to capture port traffic and store to the Fabric Manager database. You can generate reports and graphs based on the stored data.
- Alert View
 - A new view that displays switch status change alerts, switch unreachable alerts, and Change Management triggered alerts. You can easily identify switches and fabrics with alerts in the SAN Elements tab and the At-A-Glance windows, as they are identified with an alert icon.

- Global Fabrics, Switch Groups, and Port Groups
 - Switch and port groups created by any user, and all discovered fabrics are saved to the Fabric Manager server and are available to all clients using that server.

System Requirements - Windows Environments

HP recommends that your machines have the following, if you are running client and server separately:

- Client: A 1.8 GHz CPU with a minimum 512 MB memory.
- Server: A 2.0 GHz P4 CPU with a minimum 768 MB memory.

You should use the server requirements if you are running client and server on the same machine.

System Requirements - Solaris Environments

HP recommends that your machines have the following if you are running client and server separately:

- Client: An Ultra 30 400 MHz CPU with a minimum 768 MB memory.
- Server: An Ultra 60 450 MHz CPU with a minimum 2 GB memory.

You should use the server requirements if you are running client and server on the same machine.

Switch Support

Fabric Manager supports the following devices:

- HP StorageWorks 1 GB switches
- HP StorageWorks 2 GB switches
- HP StorageWorks Core Switch 2/64
- HP StorageWorks SAN Director 2/128
- HP StorageWorks MP Router

Fabric Manager displays a description of the switch type in the At-A-Glance window in the Overview view. [Table 1](#) lists the HP switch types and their corresponding descriptions.

Table 1: Fabric Manager Switch Descriptions

HP Switch	Fabric Manager Description
Fibre Channel Storage Switch 8	1Gbit 8-port entry switch
Fibre Channel Storage Switch 16	1Gbit 16-port entry switch
StorageWorks SAN Switch 8	1Gbit 8-port switch
StorageWorks SAN Switch 16	1Gbit 16-port switch
HP StorageWorks SAN Switch 2/8-EL	2Gbit 8-port switch
HP StorageWorks SAN Switch 2/8V	2Gbit 8-port switch w/switch limit
HP StorageWorks SAN Switch 2/16	2Gbit 16-port switch

Table 1: Fabric Manager Switch Descriptions (Continued)

HP Switch	Fabric Manager Description
HP StorageWorks SAN Switch 2/16V	2Gbit 16-port switch w/switch limit
HP StorageWorks SAN Switch 2/32	2Gbit 32-port switch
HP StorageWorks Core Switch 2/64	2Gbit core fabric switch
HP StorageWorks SAN Director 2/128	2Gbit 128-port core fabric switch
HP StorageWorks MP Router	2GbitFC/ 1GbE 16-port Fabric
HP StorageWorks MSA SAN Switch 2/8	2Gbit 8-port embedded fabric switch

Host Support

Fabric Manager 4.2.x supports the following hosts:

- Windows® 2003 Client and Server
- Windows XP Client and Server
- Windows 2000 Client and Server
- Windows NT® Client (no Server)
- Solaris 2.9 Client and Server
- Solaris 2.8 Client and Server
- Solaris 2.7 Client and Server

Installation

To upgrade from a version of Fabric Manager earlier than 4.2.x to Fabric Manager v4.2.x, you can just run install and the installer will launch the existing uninstaller to uninstall the earlier version. You can then install the new Fabric Manager 4.2.x. Your configuration from the previous installation is migrated to the latest installation. Refer to the *HP StorageWorks Fabric Manager Version 4.2.x User Guide* for more information.

Windows (FM Client and/or FM Server)

1. Insert the Fabric Manager CD into the CD-ROM drive.
The CD auto-launches the Fabric Manager Installation Wizard. If the Fabric Manager Installation Wizard does not auto-launch, navigate to the Windows folder on your machine and run `Install.exe`.
2. Follow the instructions to complete the installation.

Solaris (FM Client and/or FM Server)

1. Insert the Fabric Manager CD into the CD-ROM drive.
2. Execute `Install.bin`.

Running Fabric Manager

Fabric Manager server runs as a service on Windows and is started automatically after installation.

1. Windows FM client: Select **Start > Fabric Manager > Fabric Manager**.

Solaris FM client: Navigate to the FM install folder and execute `./startFabricManager`.
2. Enter your Username, password, IP address, and the port number of the FM server, providing login authentication.
3. Enter the IP address or name of an HP StorageWorks switch in the address field to start managing your fabric.

Installation Notes

Read and consider the following information before installing Fabric Manager.

- If you are upgrading from a previous version of Fabric Manager, refer to the *HP StorageWorks Fabric Manager Version 4.2.x User Guide*.

Installing the Fabric Manager client: If you are installing Fabric Manager client over an existing installation of the Fabric Manager client (without first uninstalling the old version), the installation wizard does not check to see if there is an existing path specified for the Fabric Manager client during the installation. It just appends to the system path file, resulting in multiple paths.

Although multiple paths do not affect functionality, they could result in other applications being unable to add additional path names, since the length of the Fabric Manager client path is too great. If you see this problem, then manually edit the system path to include only one Fabric Manager client directory.

- If the Setup/Install GUI never comes up during install, run the DOS command `dxdiag` and make sure that the graphics tests run without error. If any DirectX files are missing or any diagnostics fail, go to the Microsoft® web site and upgrade to the latest version of DirectX.
- To find the domain name to use as the windows authentication domain, which must be specified during installation, open a DOS window and type `set`. The alias `USERDOMAIN` indicates the active domain. If the client and server are to reside on different Microsoft domains, both domains must have trusts established between them, or Fabric Manager cannot authenticate the client. You should know which domain your systems are in, or you should check with your IT department. Note also that this domain is not the internet domain (as in `corp.mycompany.com`); it is the domain name that Microsoft users for authentication.
- The client and server software poll different fabric information directly, so the client and server must be able to access each switch via an IP connection. Make sure that the network environment does not have any proxy server or firewall between the client and the server and the switches. If one exists, ensure that proper rules are set up to allow access.
- If you have problems installing on a Solaris system, you might be able to resolve them by making sure the recommended J2SE patches for Solaris Java™ applications is installed. These patches can be found at <http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/patch-access>.

Use the appropriate patch for your version of Solaris. Issues might also be encountered when using XWindows emulators from Windows to access the Sun host.

- The Java Runtime Environment (JRE) used by Fabric Manager is embedded in the Fabric Manager install image and no separate Java installation is required. When FM is installed, the JRE included in the FM install image is installed in the directory where FM is installed and is available for use only to FM. The FM JRE installation does not set or modify any Java-related environment variables or Windows registry entries. This JRE does not replace any other JRE installed on the system and does not conflict with any other JRE that may be installed on the system. The FM JRE is not used by Advanced Web Tools. You can install or run any other application (including Advanced Web Tools) using a different JRE and it will neither conflict with the JRE included in FM nor will the FM JRE conflict with it. In other words, the JRE installed with FM is entirely embedded in FM and used only by FM. This version of FM includes JRE version 1.4.2_03.
- Before installing, check to make sure the system has the latest video drivers installed (to be safe, you may want to upgrade to the latest DirectX drivers as well). Certain systems might crash with a Blue Screen or the setup GUI might not start up - caused by an interaction between Java, Microsoft DirectX drivers, and the video driver. The crash/GUI issues have been resolved by upgrading the mentioned drivers and DirectX to the latest versions. The following link takes you to the page from Sun that mentions the issue (search on “blue screen”): <http://java.sun.com/j2se/1.41/relnotes.html>.
- After the evaluation version is installed, users must upgrade to a licensed version within 60 days. After the time-out occurs, users are presented with a dialog that allows them to license the product.

Operating System Support

Fabric Manager 4.2.x is recommended for all environments. [Table 2](#) summarizes the versions of HP firmware and software that are supported in conjunction with this release. Refer to the *HP StorageWorks SAN Design Reference Guide* for more information.

Table 2: Supported Versions of Firmware and Software

Area	1GB Switches	SAN Switches 2/8-EL and 2/16	SAN Switch 2/32 and Core Switch 2/64	SAN Switches 2/8V, 2/16V, and SAN Director 2/128	MP Router
Fabric Manager Compatibility (FM 4.x or later recommended)	FM 3.0.2c or later (not supported with Fabric OS later than v2.6.1)	FM 3.0.2c or later	FM 3.0.2c or later	FM 4.1.1 or later	FM 4.2.0

Documentation Updates

This section lists updates that should be made to the documentation supporting this release. Refer to the *HP StorageWorks Fabric Manager Version 4.2.x User Guide*

HP StorageWorks Fabric Manager Version 4.2.x User Guide

On page 7, in the section “SAN Elements Tab,” replace the following bullet:

- Gray indicates the element is unknown or unmonitored.

with the following:

- Light blue indicates the element has been discovered in the fabric, but its status is not yet known. When Fabric Manager determines the status of the element, the icon color changes from light blue to green, yellow, or red, depending on its status.

If Fabric Manager loses connection to the switch, an alert is generated, but the element icons do not change color. The icon colors indicate the last known status of the switch. You must check the icon colors and the alerts to verify status.

On page 73, in the section “Creating a CM Profile,” insert the following note after the second paragraph in step 10:

Note: Fabric Manager server purges snapshots at 12:00 PM (noon) if the option to purge older snapshots is selected in a profile.

On page 118, in the section “Identifying Switches and Fabrics with Alerts,” insert the following text and graphic after the first bullet:

The alert icons are shown below:



Important Notes

Table 3 lists issues associated with Fabric Manager 4.2.x and workarounds.

Table 3: Issues and Workarounds

Issue	Description and Workaround
HBA firmware download	<p>Issue: Firmware download does not work for certain earlier and unsupported versions of HBA firmware, driver, and HBAnyware versions.</p> <p>Workaround: Use the latest versions of each (together) to correct this issue. The current version of Driver tested is v5-5.00a10-1 for Windows 2000 with firmware v3.90a7. The current version of HBAnyware is included with this driver package.</p>
Upgrading Fabric Manager	<p>Issue: If you try to install the Fabric Manager server immediately after you close the Fabric Manager client, the installer indicates that the port is in use. This happens because when you close a Fabric Manager client program, the Fabric Manager server takes about four minutes to free the connection port.</p> <p>Workaround: Wait about four to five minutes after closing all clients before installing the Fabric Manager server.</p>
Upgrading Fabric Manager	<p>Issue: If you are upgrading from Fabric Manager 4.0.x server only install to Fabric Manager 4.1.0 or later, you are asked to reenter your Fabric Manager serial number and license key to complete the install (see the workaround). However, if you are upgrading from Fabric Manager 4.1.0 server only install to Fabric Manager 4.1.1 or later, you are not asked to reenter your Fabric Manager serial number and license key.</p> <p>Workaround: Before attempting the install, open the currently installed Fabric Manager and click Help > Register to display the current serial number and license key. Note this information for use during the upgrade process.</p>
Changing Printers in Fabric Manager	<p>Issue: If you have multiple printers configured, selecting a non-default printer on the page setup dialog in Fabric Manager might crash the Fabric Manager client when you click OK. This occurs rarely on some Windows hosts.</p> <p>Workaround: To prevent the Fabric Manager client from crashing, do not change the printer from the page setup dialog. Change the printer either from the print dialog or change the default printer on Windows, close and relaunch the Fabric Manager client, and then print the selected views.</p>
Database transaction log file and FM client/server log files	<p>Issue: Database transaction log file and FM client/server log files are never deleted or truncated. Depending on the size of your SAN, these files may continue to grow and take up disk space.</p> <p>Workaround: You can manually delete the older FM client/server log files. These files are in the following locations:</p> <p>FabricManager_InstallDir\server\server\log FabricManager_InstallDir\client\log</p> <p>The database transaction log file cannot be deleted. Ensure you have sufficient disk space.</p>
LSAN Info view	<p>Issue: LSAN info view retrieval fails when more than approximately 909 LSAN zones are present. LSAN info view generates error code-221.</p> <p>Workaround: Obtain information via CLI using the <code>lsanzoneshow</code>, <code>fcproxydevshow</code>, and <code>fcphydevshow</code> commands.</p>
Security Admin	<p>Issue: Error code -221 is returned if the fabric has recovered from an unstable (reconfiguring) state upon bringing up Security Admin.</p> <p>Workaround: Run Security Admin after fabric is in a completely stable state and has not reconfigured for over 10 minutes due to a CP failover or <code>switchDisable</code> or <code>switchEnable</code> event.</p>

Table 3: Issues and Workarounds (Continued)

Issue	Description and Workaround
Security Admin	<p>Issue: Security Admin returns error code -65 after removing members and activating FCS policy.</p> <p>Workaround: Select Save before activating sequentially when removing five or more members from an FCS policy list. This allows the database to commit the changes without timing difficulties.</p>
Timeout	<p>Issue: FM fails to timeout when it does not receive a response to its http request sent to the switch. Occurs only if the switch reboots or the web server restarts on the switch while Fabric Manager is waiting for a response to its http request.</p> <p>Workaround: The cursor changes to an hourglass, but FM is still responsive. User can close and restart FM to reset the cursor.</p>
Device table	<p>Issue: The Device table and Device ports table views are missing entries that are connected to unmonitored switches.</p> <p>Workaround: If the unmonitored switches are B-Series switches, restore TCP/IP connectivity to those switches so that they are no longer unmonitored. If the unmonitored switch is an M-Series switch and part of an interop fabric, they can be viewed in the Name Server view, which can be launched via a right click menu on a fabric node.</p>
Supportshow switch failure	<p>Issue: At least one v3.x switch fails when running <code>SupportShow</code> against multiple switches.</p> <p>Workaround: Rerun <code>SupportShow</code> against the single failing switch.</p>
Version time stamp reset	<p>Issue: Merging two secure fabrics fails with version time stamp reset (error 3604).</p> <p>Workaround: Close the merge with Secure Fabric Wizard and run the merge again.</p>
Switch not shown in GUI	<p>Issue: In fabrics with approximately 20 or more switches, at least one switch in SwitchGroups is not shown in the GUI after core switches are enabled or disabled.</p> <p>Workaround: Exit and restart the client. Do not add the lost switches again, since the switches do exist in the switch group. They are not shown in the client until the client is restarted.</p>
Windows installer hang	<p>Issue: The Windows installer may hang while installing FM on a Windows machine.</p> <p>Workaround: Run the installer with the command line option <code>install.exe -DREFRESH_ENV=false</code>. Reboot your machine when the installer completes.</p>
Empty fabric in FM tree	<p>Issue: An empty fabric is produced in the FM tree during segmentation/merge.</p> <p>Workaround: Segment/merge switch nodes one at a time, thereby not causing an entire FM tree segmentation.</p>
Fabric switches undiscovered	<p>Issue: Fabric switches are in blue, undiscovered state for approximately 4-5 minutes when four simultaneous fabrics are discovered, one immediately after another.</p> <p>Workaround: Wait for the discovery process to complete.</p>

Feature Availability

Some Fabric Manager features are available only with switches running a Fabric OS version later than 4.2.x. These features are:

Switch Health	The Switch Health feature is available only for switches and directors running firmware versions later than 4.2.x. If you have a switch or director running firmware version 4.2.x or earlier, the Switch Health option from the Actions menu is disabled.
Devices View and Device Ports View (Initiator Target Information)	In the Devices view and Device Ports view, the Role column displays information only for switches running firmware versions later than 4.2.x. If you have a switch or director running firmware version 4.2.x or earlier, the value for the role column in the Devices view and Device Ports view is displayed as Unknown.
Enable/Disable Secure Mode	The Actions > Security > Enable Secure Mode option and the Actions > Security > Disable Secure Mode option are applicable only to switches running firmware versions later than 4.2.x. If you have a switch or director running firmware version 4.2.x or earlier, selecting these menu options displays an error message.

